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Pump-Probe Photoionization Spectroscopy of penta methyl cyclopentadiene PETER WEBER, FEDOR RUDAKOV, Brown University — The ultrafast curve crossing from the excited electronic state to the ground state in cyclic dienes often proceeds via conical intersections. Time-resolved experiments were performed by exciting the first excited state of pentamethylcyclopentadiene, as well as other methylated cyclopentadiene derivatives, with femtosecond pulses at 260 nm. Photoionization with a time-delayed probe pulse yields delay-time dependent mass and photoelectron spectra that reveal the ultrafast character of the curve crossing dynamics.

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